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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,993	07/08/2003	Bryan E. Bloodworth	TI-35566	8156

23494 7590 03/07/2006

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EXAMINER
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NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,993

Applicant(s)

BLOODWORTH ET AL.

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-15 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 and 21-23 is/are allowed.
- 6) ☒ Claim(s) 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/21/06</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramalho et al U.S. Patent No. 5,841,603 in view of Leighton et al U.S. Patent No. 6,285,221 and further in view of Applicant's admitted prior art (A.A.P.A.).

Regarding claim 18, the rejection applied to claim 18 in the previous Office action mailed August 13, 2005 is herein repeated for the same reasons (see Response to Arguments).

3. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramalho et al U.S. Patent No. 5,841,603 in view of Leighton et al U.S. Patent No. 6,285,221.

Regarding claims 19 and 20, the rejections applied to claims 19 and 20 in the previous Office action mailed August 13, 2005 are herein repeated for the same reasons (see Response to Arguments).

***Allowable Subject Matter***

4. Claims 12-15, 21, 22, and 23 are allowed.
5. The following is an examiner's statement of reasons for allowance:

Regarding claims 12-15 and 23, reasons for allowance are as discussed in the previous Office action mailed August 13, 2005.

Regarding claims 21 and 22, claim 21 recites a preamplifier comprising an overshoot system coupled to a current mirror and an H-bridge circuit, a first write head connection node adapted to produce a first write signal, wherein a first current source is coupled to a common mode generator and is adapted to provide current; wherein the current is adapted to establish a voltage across the first write head connection node and the second write head connection node, the voltage pulled toward the first polarity and the voltage pulled toward the second polarity are substantially centered about a common mode voltage and wherein at least a portion of the common mode generator is off for a period of time when at least a portion of the overshoot system is on, which is neither taught or an obvious variation of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Applicant's arguments filed December 19, 2005 have been fully considered but they are not persuasive. Regarding claim 18, Applicant's argues in the response filed December 19, 2005, to the previous Office action that Ramalho et al in view of Leighton et al and further in view of Applicant's admitted prior art fail to disclose a current mirror coupled to the common mode generator and to the H-bridge circuit, the first current source being programmable. The Examiner however, respectfully disagrees since Ramalho et al discloses a current mirror circuits 4, 22, 30, and 38 and common mode generator (Fig. 5) both coupled to write terminals 6 and 8 (column 12, lines 56-60) and to an H-bridge circuit (see Fig. 1). Ramalho et al further disclose a

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current source coupled to the common mode generator (Fig. 6 and disclosure thereof), but fail to explicitly show the current source being programmable. However, it is considered that no unexpected result is to occur to make the first current source programmable. Examiner points Applicant to the current application's specification on page 2, paragraph 6 where Applicant admits that conventional common mode circuits use programmable current sources. For these reasons it is considered that the references meet the limitations of the Applicant's invention as claimed.

Regarding claims 19 and 20, Applicant argues that Ramalho et al in view of Leighton et al fail to show a first current source coupled to the common mode generator, the Examiner however respectfully disagrees for the reasons discussed in the above response regarding claim 18. Applicant further argues that Ramalho et al in view of Leighton et al fail to disclose a second current source coupled to the overshoot system, however Examiner respectfully disagrees. Leighton et al discloses a current source which allows control of the overshoot of a write current in order to suppress ringing in the driver circuit. It is considered that combining the current sources disclosed by Ramalho et al and Leighton et al would have been obvious to one having ordinary skill in the art at the time the invention was made in order to achieve the benefits disclosed by the references. Therefore it is considered that the references meet the limitations of the Applicant's invention as claimed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


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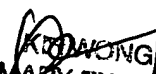
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN   
March 1, 2006

  
KIDAWONG  
PRIMARY EXAMINER  
PATENT EXAMINER